

What is claimed is:

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1. A print system for use through a network, comprising:  
a service system connected to the network and having a storage section in which a plurality of data are stored in a plurality of data storing locations; and  
a printer client system connected to the network and having a printer, wherein the printer client system accesses the service system through the network so as to obtain a data storing location of request data, downloads the request data from the obtained data storing location of the storage section, and conducts printing on the basis of the request data by the printer; and  
wherein the printer client system notifies the printing result to the service system.
2. The print system of claim 1, wherein the service system has a calculating section to calculate a payment to be charged for the printer client system in accordance with the printing result.
3. The print system of claim 1, wherein the service system has a cryptograph processing section to encrypt the request

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data and the printer client system downloads the encrypted request data.

4. The print system of claim 1, wherein the storage section comprises a data server to store the plurality of data at the plurality of data storing locations and a master server to store data regarding the plurality of data storing locations.

5. The print system of claim 1, wherein the printer client system sets a cryptograph key for each client, and wherein when the printer client system accesses the service system, the printer client system provided the request data with a digital signature encrypted by the cryptograph key.

6. The print system of claim 1, wherein when the printer client system accesses the service system, the printer client system provided the request data with a digital signature by a public key cryptograph method.

7. The print system of claim 1, wherein the printer client system has an information processing apparatus.

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8. The print system of claim 7, wherein the information processing apparatus orders the printer to conduct the printing on the basis of the request data after obtaining the data storing location and downloading the request data and notifies the printing result after obtaining the printing result from the printer.

9. The print system of claim 1, wherein the service system transmits estimated payment information for the request data to the printer client system and the printer client systems indicates an estimated payment on the basis of the estimated payment information.

10. A print system for use through a network, comprising:

a service system connected to the network and having a storage section in which a plurality of data are stored, and a calculating section to calculate a payment to be charged; and

a printer client system connected to the network and having a printer, wherein the printer client system accesses the service system through the network, downloads request data from the storage section, conducts printing on the basis of the request data by the printer and notifies the printing result of the request data to the service system; and

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wherein the calculating section of the service system calculates the payment to be charged for the printer client system in accordance with the printing result.

11. A print system for use through a network, comprising:

a service system connected to the network and having a storage section in which a plurality of data are stored in a plurality of data storing locations; and

a printer client system connected to the network and having a printer, wherein the printer client system accesses the service system through the network, downloads the request data from the storage section, and conducts printing on the basis of the request data by the printer;

wherein when the printer client system accesses the service system, the printer client system selects one of a page-unit printing mode or a book-unit printing mode, the service system changes a page arrangement order in accordance with the selected printing mode, and the printer client system downloads the request data in the form of the changed page arrangement order and conducts the printing on the basis of the request data in the form of the changed page arrangement order.

12. A print system for use through a network, comprising:

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a service system connected to the network and having a storage section in which a plurality of data are stored in a plurality of data storing locations; and

a printer client system connected to the network and having a printer, wherein the printer client system accesses the service system through the network, downloads the request data from the storage section, and conducts printing on the basis of the request data by the printer;

wherein when the printer client system accesses the service system, the printer client system selects a printing specification, the service system changes a page arrangement order in accordance with the selected printing specification, and the printer client system downloads the request data in the form of the changed page arrangement order and conducts the printing on the basis of the request data in the form of the changed page arrangement order.

13. A print system for use through a network, comprising:

a data server connected to the network and to store data in a plurality of data storing locations;

a master server connected to the network and to store data regarding the plurality of data storing locations; and

a printer client system connected to the network and having a printer, wherein the printer client system specifies

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data of a printing target and notifies the data of the printing target to the master server; the master server transmits a data storing location to the printer client system; the printer client system accesses the data server on the basis of the data storing location, downloads data from the data server and conducts printing on the basis of the downloaded data by the printer; and the printer client system notifies the printing result to at least one of the data server and the master server.

14. The print system of claim 13, wherein when the printer client system requests log-in for the master server, the master server certifies the request of log-in of the printer client system.

15. The print system of claim 13, wherein the master server transmits estimated payment information for the printing target to the printer client system and the printer client systems indicates an estimated payment on the basis of the estimated payment information.

16. The print system of claim 15, wherein the master server preserves the estimated payment information.

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17. The print system of claim 16, wherein the master server preserves the estimated payment information together with a period of validity and when the period of validity has passed over, the master server make the preserved estimated payment information to be invalid.

18. The print system of claim 15, wherein the master server transmits the preserved estimated payment information to the printer client system.

19. The print system of claim 15, wherein the printer client system sends an order signal to the master server.

20. The print system of claim 19, wherein the order signal is a signal to order in accordance with the estimated payment information.

21. The print system of claim 19, wherein the master server transmits job ID information to the printer client system in response to the order signal.

22. The print system of claim 21, wherein the data server specifies the data on the basis of the job ID information.

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23. The print system of claim 20, wherein the master server preserves the estimated payment information together with a period of validity and when the period of validity has passed over, the master server make the preserved estimated payment information to be invalid.

24. The print system of claim 20, wherein the data server specifies the printer client server capable of printing on the basis of the job ID information.

25. The print system of claim 20, wherein the data server collates the job ID information sent from the printer client system with the job ID information transmitted from the master server and specifies the printer client system capable of printing.

26. The print system of claim 20, wherein the data server forwards the job ID information sent from the printer client system to the master server and the master server collates the job ID information with the job ID information forwarded from the data server and specifies the printer client system capable of printing.

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27. The print system of claim 18, wherein the master server transmits a data storing location to the printer client system in response to the order signal.

28. The print system of claim 14, wherein at least one of the estimated payment information and the printing result is provided with a digital signature by a public key cryptography method.

29. The print system of claim 12, wherein the printer client system accesses the data server on the basis of the obtained data storing location and sends a print specification to the data server.

30. The print system of claim 29, wherein the data server conducts a data conversion processing for the specified data on the basis of the print specification.

31. The print system of claim 30, wherein the data conversion processing includes a process to change a page arrangement order into an order corresponding to a processing capability of the printer client system.

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32. The print system of claim 29, wherein the print specification includes a request of download on a unit of page or a unit of book.

33. The print system of claim 12, wherein the data server comprises encrypts the specified data and the printer client system decrypts the encrypted data and conducts the printing on the basis of the decrypted data.

34. The print system of claim 12, wherein after the printing is completed, the printer client system notified the printing result to at least one of the master server and the data server.

35. The print system of claim 12, wherein the master server conducts a payment charging processing on the basis of the printing result.

36. The print system of claim 12, wherein a trial printing is conducted before the printing.

37. The print system of claim 12, wherein the printer client system comprises an information processing apparatus.

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38. The print system of claim 37, wherein the information processing apparatus orders the printer to conduct the printing on the basis of the request data after obtaining the data storing location and downloading the request data and notifies the printing result after obtaining the printing result from the printer.

39. The print system of claim 12, wherein the master server acts as the data server.

40. A print system for use through a network, comprising:  
a data server connected to the network and to store data in a plurality of data storing locations;

a master server connected to the network and to store data regarding the plurality of data storing locations; and

a printer client system connected to the network and having a printer;

wherein the printer client system requests log-in for the master server;

the master server certifies the request of log-in of the printer client system; the printer client system specifies data of a printing target and notifies the data of the printing target to the master server;

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the master server transmits estimated payment information for the printing target to the printer client system;

the printer client system indicates a payment on the basis of the estimated payment information and sends an order signal to the master server when order in accordance with the estimated payment information;

the master server transmits job ID information and a data storing location to the printer client system in response to the order signal;

the printer client system accesses the data server on the basis of the data storing location and sends the job ID information and printing specification to the data server;

the data server specifies data on the basis of the job ID information and applies a data conversion process and a cryptograph process onto the specified data on the basis of the printing specification;

the printer client downloads transmission format data applied with the data conversion process and the cryptograph process from the data server, decrypts the transmission format data, conducts printing on the basis of the decrypted data and notifies the printing result to at least one of the master server and the data server; and the master server

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conducts a payment charging process on the basis of the printing result.

41. A printer client system connected with a service system through a network, comprising:

a communicating section to access the service system and to download data from the service system; and

a printer to conduct printing on the basis of the data; wherein the communicating section notifies the printing result to the service system.

42. The printer client system of claim 41, wherein the communicating section accesses the service system so as to obtain a data storing location and downloads the data from the service system on the basis of the data storing location.

43. The printer client system of claim 41, further comprising a storage section to store data corresponding to a rental fee for materials and a rental fee for an apparatus.

44. The printer client system of claim 41, wherein data indicating the printing result includes data indicating a success of image formations.

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45. The printer client system of claim 41, wherein the printer client system conducts a payment charging process in accordance with the printing result.

46. The printer client system of claim 45, wherein the payment charging process conducts based on data corresponding to a fee for materials and a fee for an apparatus.

47. The printer client system of claim 46, wherein the payment charging process add data corresponding to a service charge notified from the service system.

48. The printer client system of claim 47, wherein the data corresponding to a service charge of the service system includes at least one of a data conversion fee to convert the book into the image data and a service charge to provide the image data.

49. The printer client system of claim 45, wherein the data indicating the printing result includes data indicating whether image formations are succeeded or not.

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50. The printer client system of claim 49, wherein when the image formations are not succeeded, the payment charging process is not conducted.

51. The printer client system of claim 41, wherein the printer comprises a finishing section.

52. The printer client system of claim 41, wherein the printer comprises a print failure detecting section.

53. The printer client system of claim 52, wherein when the print failure detecting section does not detect a print failure, data indicating a success of image formations are transmitted as the data indicating the printing result.

54. The printer client system of claim 52, wherein when the print failure detecting section outputs a print error signal, data indicating a failure of image formations are transmitted as the data indicating the printing result.

55. The printer client system of claim 41, wherein in the case of conducting printing plural times, a payment charging process is conducted in accordance with a printing result indicating a success of printing.

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56. The printer client system of claim 55, wherein the printing result is transmitted plural times for each printing job.

57. The printer client system of claim 41, wherein the communicating section includes a selecting section to select a frequency of transmitting the printing result.

58. The printer client system of claim 56, wherein as the frequency of transmitting the printing result, the printing result is transmitted for each page.

59. A service system connected a printer client system through a network, comprising:

a storage section in which a plurality of data are stored in a plurality of data storing locations; and

a communicating section to allow the printer client system to download the data from the storage section and to receive a printing result from the printer client system which conducts printing on the basis of the downloaded data.

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60. The service system of claim 59, wherein the communicating section transmits a data storing location to the printer client system which accesses the service system.

61. The service system of claim 59, wherein data indicating the printing result includes data indicating a success of image formations.

62. The service system of claim 59, wherein when the image formations are not succeeded, the payment charging process is not conducted.

63. The service system of claim 61, wherein in the case of conducting printing plural times, a payment charging process is conducted in accordance with a printing result indicating a success of printing.

64. The service system of claim 59, wherein the service system conducts a payment charging process in accordance with the printing result.

65. The service system of claim 64, wherein the storage section stores payment charging information and data relating to a royalty of a copyright.

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66. The service system of claim 64, wherein storage section stores payment charging information and at least one of a data conversion fee to convert a book into image data a service charge to provide the image data.

67. The service system of claim 59, wherein the communication section transmits estimated payment information to the printer client system for a printing target designated by the printer client system.

68. A printer client system connected through a network with a data server to store data and a master server to store data storing locations, comprising:

a communicating section to send a specified data of a desired printing target to the master server, to receive the data storing location transmitted from the master server, to access the data server on the basis of the data storing location, and to download data from the data server; and

a printer to conduct printing on the basis of the data;

wherein the communicating section notifies the printing result to at least one of the master server and the data server.

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69. A data server connected through a network with a master server and a printer client system to store data storing locations, comprising:

a storage section in which a plurality of data are stored in a plurality of data storing locations; and

a communicating section to allow the printer client system, which receives the data storing location from the master server, to download data from the storing section on the basis of the data storing location and to receive a printing result from the printer client system which conducts printing on the basis of the downloaded data.

70. A master server connected through a network with a data server to store data and a printer client system to conduct printing based on the data, comprising:

a storage section to store data storing locations; and

a communicating section to transmit a data storing location of a printing target when the printer client system specifies the printing target and notifies the printing target and to receive a printing result from the printer client system which downloads data from the data server on the basis of the data storing location and conducts printing on the basis of the downloaded data.

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71. A print system for use through a network, comprising:  
a service system connected to the network and having a storage section in which a plurality of data are stored in a plurality of data storing locations; and

a printer client system connected to the network and having a plurality of printers, wherein the printer client system accesses the service system through the network so as to obtain a data storing location of request data, downloads the request data from the obtained data storing location of the storage section, and selects one of the plurality of printers so that the selected printer conducts printing on the basis of the request data.

72. A printer for use in a print system wherein a printer client system downloads data from a service system and conducts printing on the basis of the data, comprising:

a communicating section to access the service system so as to obtain a data storing location and to download data from the service system on the basis of the data storing location; and

a printing section to conduct printing on the basis of the data;

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wherein the communicating section notifies the printing result to the service system.

73. A printer for use in a print system wherein a printer client system to conduct printing on the basis of data, a data server to store the data and a master server to transmit a data storing location accessed by the printer client, comprising:

a communicating section to send a specified data of a desired printing target to the master server, to receive the data storing location transmitted from the master server, to access the data server on the basis of the data storing location, and to download data from the data server; and

a printing section to conduct printing on the basis of the data;

wherein the communicating section notifies the printing result to at least one of the master server and the data server.

74. A print system for use through a network, comprising:

a service system connected to the network, having a storage section in which image data of a book are stored and providing the image data through the network; and a printer client system connected to the network, obtaining the image

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data of the book through the network and having a printer to make a copy of the book by conducting image formations on recording sheets based on the obtained image data;

wherein a first charge information relating to the image data is stored in the service system, a second charge information relating to the image formations is stored in the printer client system, and a copy charge for the copy of the book is calculated based on the first charge information and the second charge information.

75. The print system of claim 74, wherein the copy charge is calculated in accordance with the printing result.

76. The print system of claim 75, wherein data indicating the printing result includes data indicating a success of image formations.

77. The print system of claim 74, wherein the first charge is set by the service system.

78. The print system of claim 74, wherein the first charge information includes a royalty of a copyright on the book.

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79. The print system of claim 78, wherein in the case that the copyright on the book is terminated when the printer client system conducts the image formations for the book, the royalty of the copy right is excluded from the first charge information.

80. The print system of claim 74, wherein the first charge information includes at least one of a data conversion fee to convert the book into the image data and a service charge to provide the image data.

81. The print system of claim 74, wherein the second charge information includes at least one of a rental fee for materials and a rental fee for an apparatus which are used at the time of the image formations by the printer client system.

82. The print system of claim 81, wherein at least one of the rental fee for materials and the rental fee for an apparatus can be set by the printer client system.

83. The print system of claim 81, wherein before the printer client system conducts the image formation, the copy charge is calculated based on at least one of the rental fee

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for materials and the rental fee for an apparatus which are expected to be used.

84. The print system of claim 81, wherein after the printer client system conducted the image formation, the copy charge is calculated based on at least one of the rental fee for materials and the rental fee for an apparatus which were used at the image formation.

85. The print system of claim 74, wherein a payment charging process is conducted based on the calculated copy charge.

86. The print system of claim 74, wherein the printer client sets selectively image forming conditions and the second charge information is changed in accordance with a selected image forming condition at the time of the image formation based on the image data.

87. The print system of claim 74, wherein the printer client system comprises a plurality of printers and the copy charge for the copy of the book is calculated for each of the plurality of printers.

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88. The print system of claim 74, wherein the first charge information is transmitted from the service system through the network to the printer client system and the printer client system calculates the copy charge.

89. The print system of claim 74, wherein the second charge information is transmitted from the printer client system through the network to the service system and the service system calculates the copy charge.

90. The print system of claim 74, wherein after the printer client conducted the image formation, the second charge information is transmitted from the printer client system through the network to the service system and the service system calculates the copy charge.

91. A print system for use through a network, comprising:  
a service system connected to the network, having a storage section in which image data of a book are stored and providing the image data through the network; and a printer client system connected to the network, obtaining the image data of the book through the network and having a printer to make a copy of the book by conducting image formations on recording sheets based on the obtained image data;

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wherein a copy charge for the copy of the book is calculated based on a first charge information which relates to the image data and is set by the service system and a second charge information which relates to the image formations and is set by the printer client system.

92. The print system of claim 91, wherein at least one of the first charge information and the second charge information is encrypted.

93. The print system of claim 91, wherein at least one of the first charge information and the second charge information is provided with a digital signature encrypted by a cryptograph key.

94. A print system for use through a network, comprising:  
a service system connected to the network, having a storage section in which image data of a book are stored and providing the image data through the network; and a printer client system connected to the network, obtaining the image data of the book through the network and having a printer to make a copy of the book by conducting image formations on recording sheets based on the obtained image data;

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wherein a copy charge for the copy of the book is calculated based on a first charge information which relates to the image data, is set by the service system and includes a royalty of a copyright on the book, a data fee to convert the book into image data and a service charge to provide the image data and a second charge information which relates to the image formations, is set by the printer client system and includes a rental fee for materials and a rental fee for an apparatus used at the time of the image formation.

95. A printer client system connected to a network, comprising:

a communicating system to obtain image data of a book from a service system through the network; and

a printer to make a copy of the book by conducting image formations on recording sheets;

wherein a copy charge for the copy of the book is calculated based on first charge information relating to the image data and second charge information relating to the image formations.

96. The printer client system of claim 95, wherein as the first charge information, the communicating system receives charge data from the service system.

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97. The printer client system of claim 95, wherein the printer comprises an image formation failure detecting section.

98. The printer client system of claim 95, further comprising a storage section to store the second charge information in accordance with the image formations.

99. The printer client system of claim 98, wherein the printer comprises an image formation failure detecting section.

100. The printer client system of claim 99, wherein a payment charging process is conducted based on the second charge information in accordance with the detection result of the image formation failure detecting section.

101. The printer client system of claim 99, wherein the communicating section transmits the second charge information to the service system in accordance with the detection result of the image formation failure detecting section.

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102. The printer client system of claim 98, wherein the printer client sets selectively image forming conditions and the second charge information is changed in accordance with a selected image forming condition at the time of the image formation based on the image data.

103. The printer client system of claim 98, wherein the communicating system transmits the second charge information.

104. The printer client system of claim 98, wherein the second charge information includes at least one of a rental fee for materials and a rental fee for an apparatus which are used at the time of the image formations by the printer client system.

105. The printer client system of claim 104, wherein at least one of the rental fee for materials and the rental fee for an apparatus can be set by the printer client system.

106. A service system connected to a network, comprising:  
a storage section in which image data of a book are stored; and

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a communicating section to provide the image data through the network to a printer client which conducts image formations based on the image data;

wherein a copy charge for the copy of the book is calculated based on first charge information relating to the image data and second charge information relating to the image formations.

107. The service system of claim 106, wherein the first charge information includes a royalty of a copyright on the book.

108. The service system of claim 107, wherein the first charge information includes at least one of a data conversion fee to convert the book into the image data and a service charge to provide the image data.

109. The service system of claim 107, wherein in the case that the copyright on the book is terminated when the printer client system conducts the image formations for the book, the royalty of the copy right is excluded from the first charge information.

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110. The service system of claim 106, wherein the second charge information includes at least one of a rental fee for materials and a rental fee for an apparatus which are used at the time of the image formations by the printer client system.

111. The service system of claim 106, wherein the printer client sets selectively image forming conditions and the second charge information is changed in accordance with a selected image forming condition at the time of the image formation based on the image data.

112. The service system of claim 106, wherein the payment charging is conducted after the print client system made the copy of the book.

113. The service system of claim 106, wherein the communicating system receives a result of the image formations.

114. A charge calculating method in a print system comprising a service system connected to a network, having a storage section in which image data of a book are stored and providing the image data through the network; and a printer

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client system connected to the network, obtaining the image data of the book through the network from the storage section and having a printer to make a copy of the book by conducting image formations on recording sheets based on the obtained image data, comprising:

calculating a copy charge for the copy of the book based on first charge information relating to the image data and second charge information relating to the image formations.

115. A payment charging method in a print system comprising a service system connected to a network, having a storage section in which image data of a book are stored and providing the image data through the network; and a printer client system connected to the network, obtaining the image data of the book through the network from the storage section and having a printer to make a copy of the book by conducting image formations on recording sheets based on the obtained image data, comprising:

charging a payment based on a copy charge for the copy of the book calculated based on first charge information relating to the image data and second charge information relating to the image formations.

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116. The payment charging method of claim 115, wherein the first charge information includes a royalty of a copyright on the book.

117. The payment charging method of claim 116, wherein the first charge information includes at least one of a data conversion fee to convert the book into the image data and a service charge to provide the image data.

118. The payment charging method of claim 116, wherein in the case that the copyright on the book is terminated when the printer client system conducts the image formations for the book, the royalty of the copy right is excluded from the first chare information.

119. The payment charging method of claim 115, wherein the second charge information includes at least one of a rental fee for materials and a rental fee for an apparatus which are used at the time of the image formations by the printer client system.

120. The payment charging method of claim 115, wherein the printer client sets selectively image forming conditions and the second charge information is changed in accordance with a

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selected image forming condition at the time of the image formation based on the image data.

121. The payment charging method of claim 115, wherein the payment charging is conducted after the print client system made the copy of the book.

122. The payment charging method of claim 115, wherein the communicating system receives a result of the image formations.

123. A print system for use through a network, comprising:  
a service system connected to the network, having a storage section in which image data of a book are stored and providing the image data through the network; and a printer client system connected to the network, obtaining the image data of the book through the network and having a printer to make a copy of the book by conducting image formations on recording sheets based on the obtained image data;

wherein when a copy of a book is made based on the same image data, a copy charge for the copy of the book becomes different in accordance with a image forming condition.

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